

Listing of Claims:

1. (Previously presented) A medical needle shield apparatus comprising:
a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;
a binding member disposed within the shield and comprising binding surfaces that define an aperture configured for slidable receipt of the needle between the retracted position and the extended position,
the binding member including a retainer extending therefrom such that the retainer is engageable with the needle to prevent inclination of the binding member while the retainer is engaged with the needle;
the binding member further comprising one or more drag inducing members that engage the needle during slidable receipt of the needle to create a drag force with the needle, the drag force and shield facilitating inclination of the binding member relative to a longitudinal axis of the needle once the retainer extends beyond the distal end of the needle such that the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield; and
a hub retainer being configured to engage a catheter hub.

2. (Original) A medical needle shield apparatus as recited in claim 1, wherein the binding member includes a substantially planar aperture plate that includes the binding surfaces that form the aperture.

3. (Original) A medical needle shield apparatus as recited in claim 2, wherein the aperture plate is substantially perpendicular relative to the longitudinal axis of the needle due to engagement of the retainer with the needle prior to the shield being in the extended position.

4. (Original) A medical needle shield apparatus as recited in claim 1, wherein the retainer includes a first portion extending from the binding member and a second portion extending from the first portion.

5. (Original) A medical needle shield apparatus as recited in claim 4, wherein the first portion extends from the binding member in substantially parallel alignment with the needle due to engagement of the retainer with the needle.

6. (Original) A medical needle shield apparatus as recited in claim 4, wherein the second portion extends transversely relative to the longitudinal axis of the needle and is configured for engagement with the needle.

7. (Original) A medical needle shield apparatus as recited in claim 6, wherein the second portion has a substantially planar portion for engagement with the needle.

8. (Original) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member includes the aperture of the binding member such that the aperture engages the needle to create the drag force with the needle.

9. (Original) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member includes a pair of friction members that extend to engage the needle to create the drag force with the needle.

10. (Original) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member includes at least one friction member disposed on the needle.

11. (Original) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member is integral to the binding member.

12. (Withdrawn) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member includes a material having a smaller aperture than the aperture of the binding member.

13. (Withdrawn) A medical needle shield apparatus as recited in claim 12, wherein the material is formed of a resilient material.

14. (Withdrawn) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing member includes a separate unitary friction element disposed on the medical needle.

15. (Withdrawn) A medical needle shield apparatus as recited in claim 14, wherein the unitary friction element includes friction elements for inclining the binding member and the aperture of the binding member is disposed between the friction elements.

16. (Withdrawn) A medical needle shield apparatus as recited in claim 1, wherein the at least one drag inducing members includes separate friction elements disposed on the needle for inclining the binding member, and the aperture of the binding member is disposed between the friction elements.

17. (Original) A medical needle shield apparatus as recited in claim 1, wherein the shield includes a housing that defines at least one blocking member extending from an interior surface thereof, the at least one blocking member being engageable with the binding member for urging the binding member to the binding orientation.

18. (Original) A medical needle shield apparatus as recited in claim 1, wherein the binding member is rotatable, relative to the longitudinal axis of the needle, between a non-binding orientation whereby the needle is slidable relative to the binding member and a binding orientation whereby the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield.

19. (Original) A medical needle shield apparatus as recited in claim 1, further comprising a rotatable housing for relative rotational movement about the needle.

20. (Original) A medical needle shield apparatus as recited in claim 19, wherein the shield is supported for relative rotational movement by the rotatable housing by at least one bearing.

21. (Original) The medical needle shield apparatus according to claim 20, wherein the hub retainer is disposed on the at least one bearing.

22. (Original) The medical needle shield apparatus according to claim 20, wherein the at least one bearing defines at least one blocking member extending from an interior surface thereof, the at least one blocking member being engageable with the binding member for urging the binding member to the binding orientation.

23. (Withdrawn) The medical needle shield apparatus according to claim 1, wherein the hub retainer is disposed on the housing.

24. (Original) The medical needle shield apparatus according to claim 1, wherein the retainer and hub retainer are monolithically formed such that the hub retainer extends from the retainer.

25. (Original) A medical needle shield apparatus as recited in claim 1, further comprising a means for extending the shield to the distal end of the needle.

26. (Withdrawn) A medical needle shield apparatus as recited in claim 1, further comprising a retainer shield to protect the hub retainer from being inadvertently moved from its intended position.

27. (Previously presented) A medical needle shield apparatus comprising:

- a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;
- a binding member disposed within the shield and including an aperture for slidable receipt of the needle between the retracted position and the extended position,
- the binding member comprising retainer means for preventing inclination of the binding member;
- the binding member further comprising drag inducing means for facilitating inclination of the binding member relative to a longitudinal axis of the needle by frictional drag forces between the drag inducing means and needle once the retainer extends beyond the distal end of the needle, and binding surface means for engaging the needle to prevent slidable movement of the needle in the extended position of the shield; and
- hub retainer means for releasably engaging a catheter hub.

28. (Original) A medical needle shield apparatus as recited in claim 27, wherein the binding member is rotatable, relative to the longitudinal axis of the needle, between a non-binding orientation whereby the needle is slidable relative to the binding member and a binding orientation whereby the binding surface means engages the needle to prevent slidable movement of the needle in the extended position of the shield.

29. (Original) A medical needle shield apparatus as recited in claim 27, further comprising a rotatable housing for relative rotational movement about the needle.

30. (Original) A medical needle shield apparatus as recited in claim 29, wherein the shield is supported for relative rotational movement by the rotatable housing by at least one bearing.

31. (Withdrawn) A medical needle shield apparatus as recited in claim 30, wherein the hub retainer means is disposed on the at least one bearing.

32. (Original) A medical needle shield apparatus as recited in claim 30, wherein the at least one bearing defines at least one blocking member extending from

an interior surface thereof, the at least one blocking member being engageable with the binding member for urging the binding member to the binding orientation.

33. (Withdrawn) A medical needle shield apparatus as recited in claim 27, wherein the hub retainer means is disposed on the housing.

34. (Withdrawn) A medical needle shield apparatus as recited in claim 27, wherein the at least one drag inducing member includes at least one friction member disposed on the needle.

35. (Original) A medical needle shield apparatus as recited in claim 27, wherein the at least one drag inducing member is integral to the binding member.

36. (Withdrawn) A medical needle shield apparatus as recited in claim 27, wherein the at least one drag inducing member includes a separate unitary friction element disposed on the medical needle.

37. (Withdrawn) A medical needle shield apparatus as recited in claim 36, wherein the unitary friction element includes friction elements for inclining the binding

member and the aperture of the binding member is disposed between the friction elements.

38. (Withdrawn) A medical needle shield apparatus as recited in claim 27, wherein the at least one drag inducing members includes separate friction elements disposed on the needle for inclining the binding member, and the aperture of the binding member is disposed between the friction elements.

39. (Original) A medical needle shield apparatus as recited in claim 27, further comprising a means for extending the shield to the distal end of the needle.

40. (Previously Presented) A medical needle shield apparatus comprising:

- a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;

- a rotatable housing that encloses the shield, the rotatable housing supporting the shield for relative rotational movement therewith;

- a hub retainer being configured to engage a catheter hub;

- a binding member disposed within the shield and comprising binding surfaces that define an aperture configured for slidable receipt of the needle between the retracted position and the extended position,

the binding member including a retainer extending therefrom such that the retainer is engageable with the needle to prevent inclination of the binding member while the retainer is engaged with the needle; and

the binding member further comprising one or more drag inducing members that engage the needle during slidable receipt of the needle to create a drag force with the needle, the drag force and shield facilitating inclination of the binding member relative to a longitudinal axis of the needle once the retainer extends beyond the distal end of the needle such that the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield.

41. (Cancelled)

42. (Previously Presented) A medical needle shield apparatus as recited in claim 40, wherein the shield is supported for relative rotational movement by the rotatable housing by at least one bearing.

43. (Currently Amended) A medical needle shield apparatus comprising:
a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;

~~a locking means for locking~~ binding the shield to the needle in the extended position by enabling the binding means to incline relative to a longitudinal axis of the needle to lock against the needle and for permitting engagement with the needle to prevent inclination and to sense the end of the needle until the shield is in the extended position, wherein the binding means is disposed in the shield;

~~an end sensing member disposed in the shield and engaging the needle for activating the locking means upon sensing the distal end of the needle; and~~

wherein the binding means further comprises a hub retainer means for releasably engaging being configured to engage the end sensing member and an inner portion of a catheter hub such that upon activation of the locking binding means the end sensing member causes the hub retainer means moves to release the catheter hub therefrom the shield so that the catheter hub and shield can be separated.

44. (Currently Amended) A medical needle shield apparatus as recited in claim 43, wherein the ~~locking means comprises:~~

~~a binding member disposed within the shield and comprising binding surfaces that define an aperture configured for slidable receipt of the needle between the retracted position and the extended position,~~

~~the binding member including a retainer extending therefrom such that the retainer is engageable with the needle to prevent inclination of the binding member while the retainer is engaged with the needle, and~~

~~the binding member further comprising one or more drag inducing members that engage the needle during slidable receipt of binding means is able to incline relative to the longitudinal axis of the needle and lock against the needle to create due to a drag force with the needle, the drag force and shield facilitating inclination of the binding member relative to a longitudinal axis of the needle once the retainer extends beyond the distal end of the needle such that the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield.~~

45. (Currently Amended) A medical needle shield apparatus as recited in claim 43, wherein the ~~locking~~ binding means comprises:

a binding member disposed within the shield and defining binding surfaces that bind to the needle as the shield is in the extended position;

a sliding member disposed within the shield for slidable receipt of the needle between the retracted position and the extended position, the sliding member including a cavity for receipt of the binding member; and

ramp surfaces disposed on the shield for positioning the binding member in locking engagement with the needle in the extended position.

46. (Previously Presented) A medical needle shield apparatus comprising:

a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;

a hub retainer being configured to engage a catheter hub,

the shield further including a control surface for engaging an outer surface of the catheter hub for guiding and supporting extension of the catheter hub therefrom;

a binding member disposed within the shield and comprising binding surfaces that define an aperture configured for slidable receipt of the needle between the retracted position and the extended position,

the binding member comprising a retainer extending therefrom such that the retainer is engageable with the needle to prevent inclination of the binding member while the retainer is engaged with the needle, and

the binding member further comprising one or more drag inducing members that engage the needle during slidable receipt of the needle to create a drag force with the needle, the drag force and shield facilitating inclination of the binding member relative to a longitudinal axis of the needle once the retainer

extends beyond the distal end of the needle such that the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield.

47. (Cancelled)

48. (Currently Amended) A medical needle shield apparatus comprising:

a shield being extensible from a retracted position to an extended position to enclose a distal end of a needle;

a binding member disposed within the shield and comprising binding surfaces that define an aperture,

the binding member comprising a retainer extending therefrom such that the retainer is engageable with the needle to prevent inclination of the binding member while the retainer is engaged with the needle, and

the binding member further comprising one or more drag inducing members that engage the needle; and

the binding member further comprising a hub retainer being configured to releasably engage a catheter hub.

49. (New) A medical needle shield apparatus as recited in claim 48, wherein the hub retainer is configured to fit into a slot of a catheter hub.

50. (New) A medical needle shield apparatus as recited in claim 48, wherein the shield is configured such that only the hub retainer holds the shield together with a catheter hub.

51. (New) A medical needle shield apparatus as recited in claim 48, wherein the binding member is configured such that inclination of the binding member moves the hub retainer to release the shield from a catheter hub.

52. (New) A medical needle shield apparatus as recited in claim 43, wherein the hub retainer means is configured to fit into a slot of a catheter hub.

53. (New) A medical needle shield apparatus as recited in claim 43, wherein the shield is configured such that only the hub retainer means holds the shield together with a catheter hub.

54. (New) A medical needle shield apparatus as recited in claim 48, wherein the binding means is configured such that inclination of the binding means moves the hub retainer means to release the shield from a catheter hub.